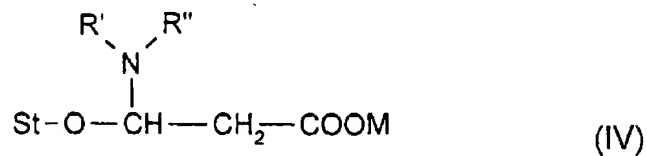
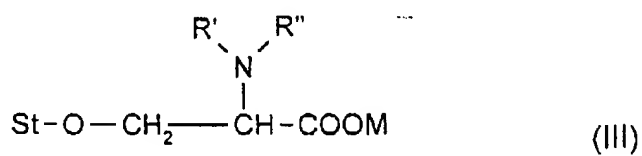
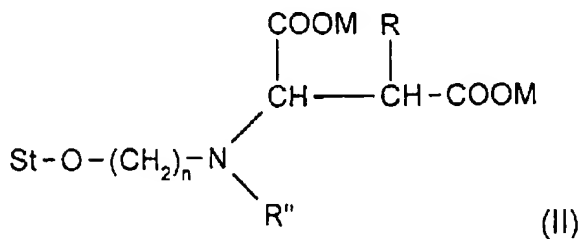
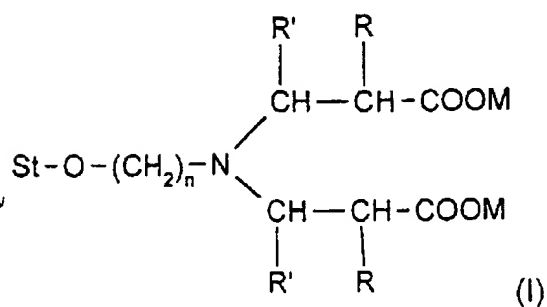


**WHAT IS CLAIMED IS:**

1. A cosmetic composition, comprising in a cosmetically acceptable medium:
  - a) at least one amphoteric starch chosen from the compounds of formulae (I) to

(IV):



wherein:

St-O is a starch moiety,

R, which may be identical or different, are each chosen from a hydrogen atom and a methyl group,

R', which may be identical or different, are each chosen from a hydrogen atom, a methyl group, and a -COOH group,

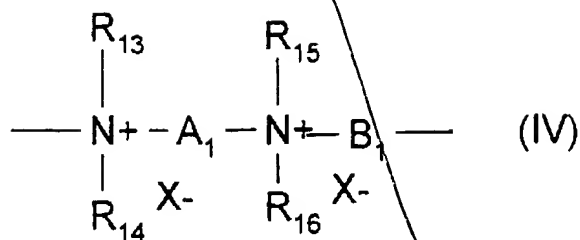
n is chosen from integers ranging from 2 to 3,

M, which may be identical or different, are each chosen from a hydrogen atom, an alkali metal, an alkaline-earth metal, NH<sub>4</sub>, quaternary ammonium compounds, and organic amines, and

R", which may be identical or different, are each chosen from a hydrogen atom, and alkyl groups comprising from 1 to 18 carbon atoms; and

b) at least one cationic conditioner chosen from cationic silicones, quaternary ammonium salt surfactants, cyclopolymers of alkyl diallylamine, cyclopolymers of dialkyl diallylammonium, and polyquaternary ammonium polymers chosen from:

(1) diquaternary ammonium polymers comprising repeating units of formula (IV):



wherein:

- R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, which may be identical or different, are each chosen from aliphatic groups comprising from 1 to 20 carbon atoms, alicyclic groups comprising from 1 to 20 carbon atoms, arylaliphatic groups comprising from 1 to 20 carbon atoms, lower hydroxyalkylaliphatic groups, and, additionally,

at least two of said R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, with the nitrogen atoms to which they are attached, form at least one heterocycle optionally comprising an additional heteroatom other than nitrogen, and, additionally,

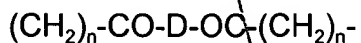
R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, which may be identical or different, are each chosen from linear and branched C<sub>1</sub>-C<sub>6</sub> alkyl groups substituted with at least one group chosen from nitrile groups, ester groups, acyl groups, amide groups and groups chosen from groups of formulae -CO-O-R<sub>17</sub>-D and -CO-NH-R<sub>17</sub>-D wherein R<sub>17</sub> is chosen from alkylene groups and D is chosen from quaternary ammonium groups;

-  $A_1$  and  $B_1$ , which may be identical or different, are each chosen from polymethylene groups comprising from 2 to 20 carbon atoms, chosen from linear and branched, saturated and unsaturated polymethylene groups wherein said polymethylene groups may optionally comprise, optionally linked to and optionally intercalated in the main chain, at least one entity chosen from aromatic rings, oxygen atoms, sulfur atoms, sulfoxide groups, sulfone groups, disulfide groups, amino groups, alkylamino groups, hydroxyl groups, quaternary ammonium groups, ureido groups, amide groups and ester groups;

-  $X^-$  is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

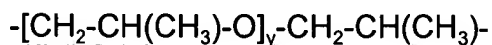
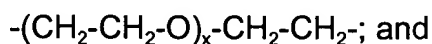
-  $A_1$ ,  $R_{13}$  and  $R_{15}$  may optionally form, together with the two nitrogen cations to which they are attached, at least one piperazine ring;

with the proviso that if  $A_1$  is chosen from linear and branched, saturated and unsaturated alkylene groups and linear and branched, saturated and unsaturated hydroxyalkylene groups,  $B_1$  may also be chosen from groups of formula:



wherein D is chosen from:

a) glycol residues of formula:  $-O-Z-O-$ , wherein Z is chosen from linear and branched hydrocarbon groups and groups chosen from groups of formulae:



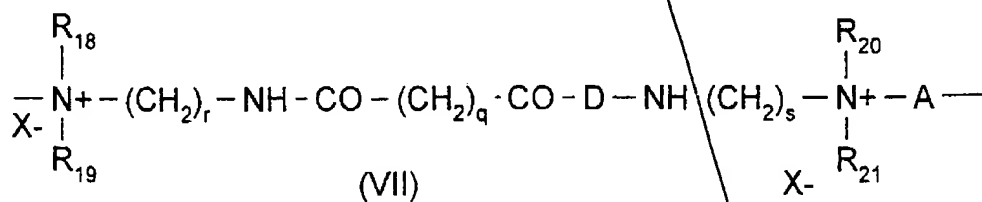
wherein x and y, which may be identical or different, are each chosen from integers ranging from 1 to 4 (in which case x and y represent a defined and unique degree of polymerization) and any number ranging from 1 to 4 (in which case x and y represent an average degree of polymerization);

b) bis-secondary diamine residues such as piperazine derivatives;

c) bis-primary diamine residues chosen from residues of formula:  $\text{-NH-Y-NH-}$ , wherein Y is chosen from linear and branched hydrocarbon groups and residues of formula  $\text{-CH}_2\text{-CH}_2\text{-S-S-CH}_2\text{-CH}_2\text{-}$ ; and

d) ureylene groups of formula:  $\text{-NH-CO-NH-}$ ; and

(2) polyquaternary ammonium polymers comprising at least one unit of formula (VII):



wherein:

-  $R_{18}$ ,  $R_{19}$ ,  $R_{20}$  and  $R_{21}$ , which may be identical or different, are each chosen from a hydrogen atom, a methyl group, an ethyl group, a propyl group, a  $\beta$ -hydroxyethyl group, a  $\beta$ -hydroxypropyl group, and a  $-\text{CH}_2\text{CH}_2(\text{OCH}_2\text{CH}_2)_p\text{OH}$  group, wherein  $p$  is an integer ranging from 0 to 6;

with the proviso that  $R_{18}$ ,  $R_{19}$ ,  $R_{20}$  and  $R_{21}$  are all not simultaneously hydrogen atoms;

-  $r$  and  $s$ , which may be identical or different, are each chosen from integers ranging from 1 to 6;

-  $q$  is an integer ranging from 1 to 34;

-  $X^-$  is chosen from anions of inorganic and organic acids,

-  $D$  is chosen from direct bonds and  $-(\text{CH}_2)_t\text{-CO-}$  groups wherein  $t$  is 4 or 7; and

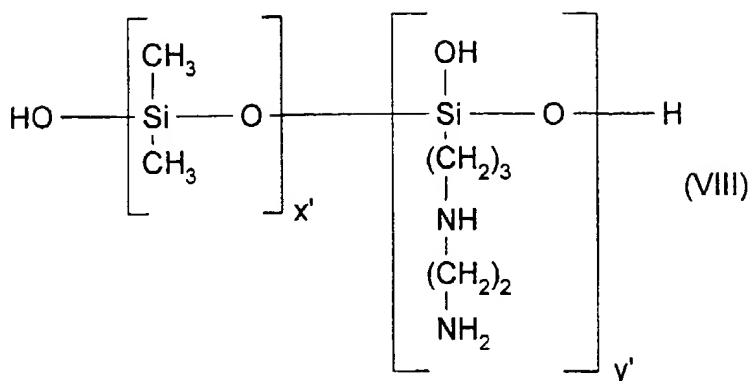
-  $A$  is chosen from dihalide groups and a group of formula  $-\text{CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2\text{-}$ .

2. A composition according to claim 1, wherein said at least one amphoteric starch is chosen from the compounds of formulae (I) and (II).

3. A composition according to claim 2, wherein  $R$ ,  $R'$  and  $R''$  are hydrogen and  $n$  is equal to 2.

4. A composition according to claim 1, wherein said cationic silicones are chosen from:

(a) polysiloxanes of formula (VIII):



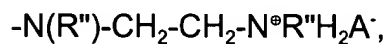
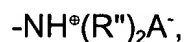
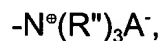
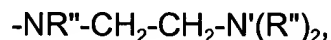
wherein  $x'$  and  $y'$  are chosen from integers dependent on the molecular weight; and

(b) aminosilicones of formula (IX):



wherein:

- G, which may be identical or different, are each chosen from a hydrogen atom, a phenyl group, an -OH group, and C<sub>1</sub>-C<sub>8</sub> alkyl groups,
- a, which may be identical or different, are each chosen from integers ranging from 0 to 3,
- b is chosen from 0 and 1,
- m and n, which may be identical or different, are numbers such that the sum (n + m) ranges from 1 to 2,000, wherein n is chosen from a number ranging from 0 to 1,999, and m is chosen from a number ranging from 1 to 2,000;
- R', which may be identical or different, are each chosen from monovalent groups of formula -C<sub>q</sub>H<sub>2q</sub>L, in which q is a number ranging from 2 to 8, and L is an optionally quaternized amine group chosen from the groups:



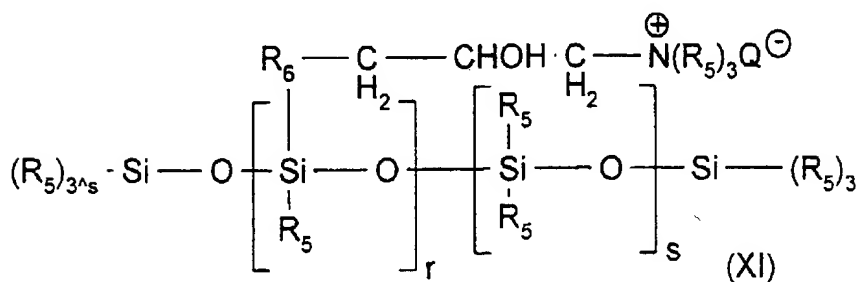


in which:

- R", which may be identical or different, are each chosen from a hydrogen atom, a phenyl group, a benzyl group, and saturated monovalent hydrocarbon groups, and

- A<sup>-</sup> is a halide ion;

(c) aminosilicones of formula (XI):



wherein:

- R<sub>5</sub>, which may be identical or different, are each chosen from monovalent hydrocarbon groups comprising 1 to 18 carbon atoms;

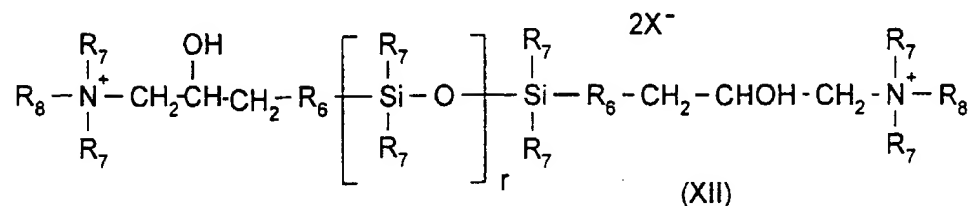
- R<sub>6</sub> is a divalent hydrocarbon group;

- Q<sup>-</sup> is chosen from anions;

- r is an average statistical value ranging from 2 to 20; and

- s is an average statistical value ranging from 20 to 200;

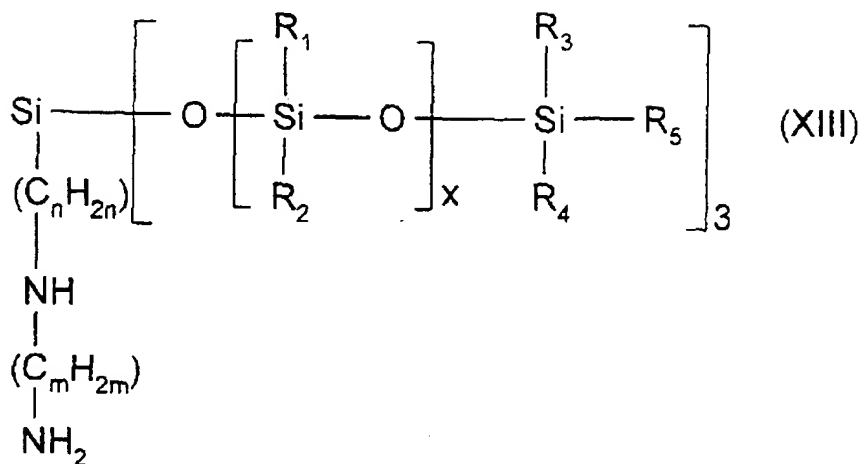
d) quaternary ammonium silicones of formula (XII):



wherein:

- R<sub>7</sub>, which may be identical or different, are each chosen from monovalent hydrocarbon groups comprising 1 to 18 carbon atoms;
- R<sub>6</sub>, which may be identical or different, are each chosen from divalent hydrocarbon groups;
- R<sub>8</sub>, which may be identical or different, are each chosen from a hydrogen atom, and monovalent hydrocarbon groups comprising 1 to 18 carbon atoms;
- X<sup>-</sup> is chosen from anions; and
- r is an average statistical value ranging from 2 to 200; and

e) aminosilicones of formula (XIII):



wherein:

- $\text{R}_1$ ,  $\text{R}_2$ ,  $\text{R}_3$  and  $\text{R}_4$ , which may be identical or different, are each chosen from  $\text{C}_1$ - $\text{C}_4$  alkyl groups, and a phenyl group,
- $\text{R}_5$  is chosen from  $\text{C}_1$ - $\text{C}_4$  alkyl groups, and a hydroxyl group,
- $n$  is an integer ranging from 1 to 5,
- $m$  is an integer ranging from 1 to 5, and

- x is chosen such that the amine number ranges from 0.01 to 1 meq/g.

5. A composition according to claim 4, wherein in said aminosilicones of formula (IX):

- a is 0,

- b is 1, and

- m and n, which may be identical or different, are chosen from numbers such that the sum (n + m) ranges from 50 to 150, wherein n is chosen from a number ranging from 49 to 149, and m is chosen from a number ranging from 1 to 10.

6. A composition according to claim 4, wherein in said aminosilicones of formula (IX), G are each chosen from a methyl group.

7. A composition according to claim 4, wherein in said aminosilicones of formula (IX), R<sup>n</sup>, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 20 carbon atoms, and A<sup>-</sup> is an ion chosen from fluoride, chloride, bromide, and iodide ions.

8. A composition according to claim 4, wherein in said aminosilicones of formula (XI), Q<sup>-</sup> is chosen from halide ions.

9. A composition according to claim 4, wherein in said aminosilicones of formula (XI):

- R<sub>5</sub>, which may be identical or different, are each chosen from C<sub>1</sub>-C<sub>18</sub> alkyl groups, and C<sub>2</sub>-C<sub>18</sub> alkenyl groups;

- R<sub>6</sub> is a group chosen from C<sub>1</sub>-C<sub>18</sub> alkylene groups, and divalent C<sub>1</sub>-C<sub>18</sub> groups;

- Q<sup>-</sup> is chosen from chloride ions and organic acid salts;
- r is an average statistical value ranging from 2 to 8; and
- s is an average statistical value ranging from 20 to 50.

10. A composition according to claim 4, wherein in said aminosilicones of formula (XI), R<sub>5</sub> are each chosen from a methyl group.

11. A composition according to claim 4, wherein in said aminosilicones of formula (XI), R<sub>6</sub> is a C<sub>1</sub>-C<sub>8</sub> alkyleneoxy group connected to the Si by an SiC bond.

12. A composition according to claim 4, wherein in said aminosilicones of formula (XI), Q<sup>-</sup> is acetate.

13. A composition according to claim 4, wherein in said quaternary ammonium silicones of formula (XII):

- R<sub>7</sub>, which may be identical or different, are each chosen from C<sub>1</sub>-C<sub>18</sub> alkyl groups, C<sub>2</sub>-C<sub>18</sub> alkenyl groups, and rings comprising 5 to 6 carbon atoms;

- R<sub>6</sub>, which may be identical or different, are each chosen from C<sub>1</sub>-C<sub>18</sub> alkylene groups and divalent C<sub>1</sub>-C<sub>18</sub> groups;

- R<sub>8</sub>, which may be identical or different, are each chosen from C<sub>1</sub>-C<sub>18</sub> alkyl groups, C<sub>2</sub>-C<sub>18</sub> alkenyl groups and groups of formula -R<sub>6</sub>-NHCOR<sub>7</sub>;

- X<sup>-</sup> is chosen from chloride ions and organic acid salts; and
- r is an average statistical value ranging from 5 to 100.

14. A composition according to claim 4, wherein in said quaternary ammonium silicones of formula (XII), R<sub>7</sub> are each chosen from a methyl group.

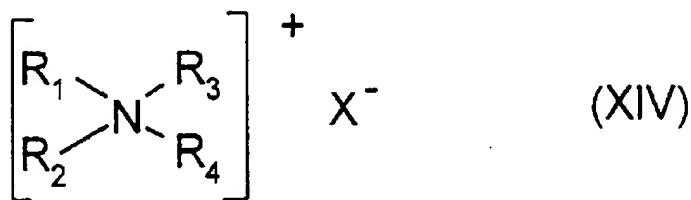
15. A composition according to claim 4, wherein in said quaternary ammonium silicones of formula (XII),  $R_6$  are each chosen from  $C_1$ - $C_8$  alkylenoxy groups connected to the Si by an SiC bond.

16. A composition according to claim 4, wherein in said quaternary ammonium silicones of formula (XII),  $X^-$  is acetate.

17. A composition according to claim 4, wherein in said polysiloxanes of formula (VIII),  $x'$  and  $y'$  are chosen from integers such that the weight-average molecular weight of said polysiloxanes of formula (VIII) ranges from 5,000 to 500,000.

18. A composition according to claim 1, wherein said quaternary ammonium salt surfactants are chosen from:

a) quaternary ammonium salts of formula (XIV):



wherein:

-  $X^-$  is an anion chosen from halides,  $(C_2$ - $C_6)$ alkyl sulfates, phosphates, alkyl sulfonates, alkylaryl sulfonates, and anions derived from organic acids,

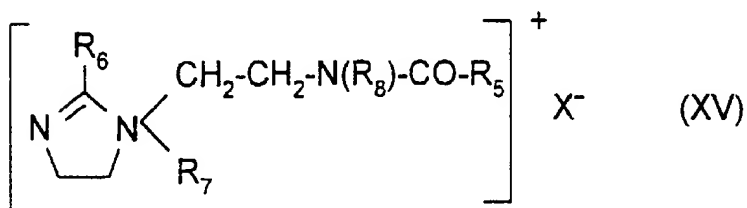
i) - the radicals  $R_1$ ,  $R_2$ , and  $R_3$ , which may be identical or different, are independently chosen from linear and branched aliphatic radicals comprising from 1 to 4 carbon atoms, optionally comprising hetero atoms and aromatic radicals, and

-  $R_4$  is chosen from linear and branched alkyl radicals comprising from 16 to 30 carbon atoms;

ii) - the radicals  $R_1$  and  $R_2$ , which may be identical or different, are independently chosen from linear and branched aliphatic radicals comprising from 1 to 4 carbon atoms, optionally comprising hetero atoms, and aromatic radicals, and

-  $R_3$  and  $R_4$ , which may be identical or different, are independently chosen from linear and branched alkyl radicals comprising from 12 to 30 carbon atoms, wherein said radicals further comprise at least one function chosen from ester functions and amide functions;

b) quaternary ammonium salts of imidazolinium of formula (XV):



wherein:

-  $R_5$  is chosen from alkenyl and alkyl radicals comprising from 8 to 30 carbon atoms,

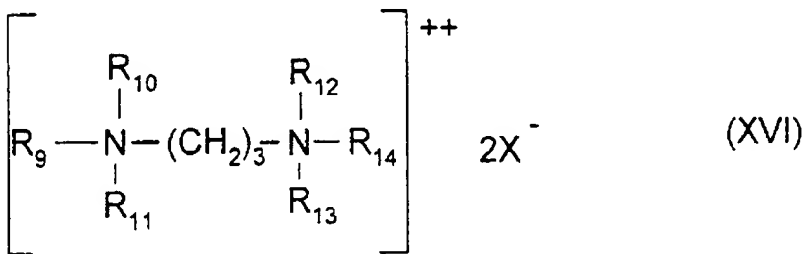
-  $R_6$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl radicals, alkenyl radicals comprising from 8 to 30 carbon atoms, and alkyl radicals comprising from 8 to 30 carbon atoms,

-  $R_7$  is chosen from  $C_1$ - $C_4$  alkyl radicals,

-  $R_8$  is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals, and

-  $X^-$  is an anion chosen from halides, phosphates, acetates, lactates, alkyl sulfates, alkyl sulfonates, and alkylaryl sulfonates;

c) diquatery ammonium salts of formula (XVI):



wherein:

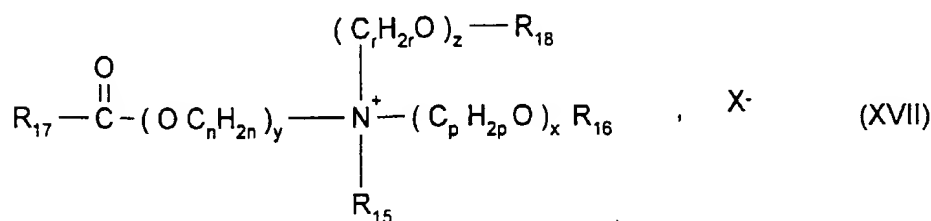
-  $R_9$  is chosen from aliphatic radicals comprising from 16 to 30 carbon atoms,



-  $R_{10}$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{13}$  and  $R_{14}$ , which may be identical or different, are independently chosen from a hydrogen atom and alkyl radicals comprising from 1 to 4 carbon atoms, and

-  $X^-$  is an anion chosen from halides, acetates, phosphates, nitrates and methyl sulfates;

d) quaternary ammonium salts of formula (XVII) comprising at least one ester function:

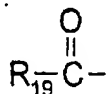


wherein:

-  $R_{15}$  is chosen from  $C_1$ - $C_6$  alkyl radicals,  $C_1$ - $C_6$  hydroxyalkyl radicals, and  $C_1$ - $C_6$  dihydroxyalkyl radicals;

-  $R_{16}$  is chosen from:

(i) acyl groups of the following formula:



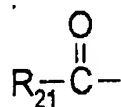
wherein  $R_{19}$  is defined below,

(ii) linear and branched, saturated and unsaturated, C<sub>1</sub>-C<sub>22</sub> hydrocarbon-based radicals, and

(iii) a hydrogen atom;

- R<sub>18</sub> is chosen from:

(i) acyl groups of the following formula:



wherein R<sub>21</sub> is defined below,

(ii) linear and branched, saturated and unsaturated, C<sub>1</sub>-C<sub>6</sub> hydrocarbon-based radicals, and

(iii) a hydrogen atom;

- R<sub>17</sub>, R<sub>19</sub> and R<sub>21</sub>, which may be identical or different, are independently chosen from linear and branched, saturated and unsaturated, C<sub>7</sub>-C<sub>21</sub> hydrocarbon-based radicals;

- n, p and r, which may be identical or different, are independently chosen from integers ranging from 2 to 6;

- y is an integer ranging from 1 to 10;

- x and z, which may be identical or different, are independently chosen from integers ranging from 0 to 10; and

-  $X^-$  is chosen from simple and complex, organic and inorganic anions;

provided that the sum  $x + y + z$  is from 1 to 15, and that when  $x$  is 0, then  $R_{16}$  is chosen from linear and branched, saturated and unsaturated,  $C_1$ - $C_{22}$  hydrocarbon-based radicals, and that when  $z$  is 0, then  $R_{18}$  is chosen from linear and branched, saturated and unsaturated,  $C_1$ - $C_6$  hydrocarbon-based radicals.

19. A composition according to claim 18, wherein in said quaternary ammonium salts of formula (XVII):

- $R_{15}$  is chosen from a methyl radical and an ethyl radical,
- $x$  and  $y$  are equal to 1;
- $z$  is equal to 0 or 1;
- $n$ ,  $p$  and  $r$  are equal to 2;
- $R_{16}$  is chosen from:



wherein  $R_{19}$  is defined below,

(ii) methyl, ethyl and  $C_{14}$ - $C_{22}$  hydrocarbon-based radicals, and

(iii) a hydrogen atom;

-  $R_{18}$  is chosen from:



wherein  $R_{21}$  is defined below, and

(iii) a hydrogen atom; and

-  $R_{17}$ ,  $R_{19}$  and  $R_{21}$ , which may be identical or different, are independently chosen from linear and branched, saturated and unsaturated,  $C_{13}$ - $C_{17}$  hydrocarbon-based radicals.

20. A composition according to claim 19, wherein  $R_{17}$ ,  $R_{19}$  and  $R_{21}$  are chosen from linear and branched, saturated and unsaturated  $C_{13}$ - $C_{17}$  aliphatic radicals.

21. A composition according to claim 19, wherein said hydrocarbon-based radicals are chosen from linear hydrocarbon-based radicals.

22. A composition according to claim 18, wherein said quaternary ammonium salts of formula (XVII) are chosen from diacyloxyethyltrimethylammonium, diacyloxyethylhydroxyethyltrimethylammonium, monoacyloxyethyldihydroxyethyltrimethylammonium, triacyloxyethyltrimethylammonium and monoacyloxyethylhydroxyethyltrimethylammonium salts.

23. A composition according to claim 22, wherein said monoacyloxyethylhydroxyethyltrimethylammonium salts are chosen from monoacyloxyethylhydroxyethyltrimethylammonium chloride salts and monoacyloxyethylhydroxyethyltrimethylammonium methyl sulfate salts.

24. A composition according to claim 18, wherein when  $R_{16}$  and  $R_{18}$  are chosen from acyl groups in said quaternary ammonium salts of formula (XVII), said acyl groups are obtained from plant oils chosen from palm oil and sunflower oil.

25. A composition according to claim 18, wherein  $X^-$  of said quaternary ammonium salts of formula (XIV) is an anion chosen from chloride, bromide, iodide, methyl sulfate, acetate, and lactate.

26. A composition according to claim 18, wherein said aromatic radicals of said quaternary ammonium salts of formula (XIV) are chosen from aryl and alkylaryl.

27. A composition according to claim 18, wherein said hetero atoms of said quaternary ammonium salts of formula (XIV) are chosen from oxygen, nitrogen, sulfur and halogens.

28. A composition according to claim 18, wherein said aliphatic radicals of said quaternary ammonium salts of formula (XIV) are chosen from alkyl, alkoxy, alkylamide, polyoxy( $C_2$ - $C_6$ )alkylene, and hydroxyalkyl radicals comprising from 1 to 4 carbon atoms.

29. A composition according to claim 18, wherein said  $R_3$  and  $R_4$  of said quaternary ammonium salts of formula (XIV) are chosen from ( $C_{12}$ - $C_{22}$ )alkylamido( $C_2$ - $C_6$ )alkyl and ( $C_{12}$ - $C_{22}$ )alkylacetate radicals.

30. A composition according to claim 18, wherein in ammonium salts of imidazolinium of formula (XV), said  $R_5$  of formula (XV) is chosen from radicals derived from tallow fatty acid.

31. A composition according to claim 18, wherein in said quaternary ammonium

salts of imidazolinium of formula (XV):

- $R_5$  and  $R_6$ , which may be identical or different, are independently chosen from alkenyl and alkyl radicals comprising from 12 to 21 carbon atoms,
- $R_7$  is methyl, and
- $R_8$  is hydrogen.

32. A composition according to claim 18, wherein said diquaternary ammonium salts of formula (XVI) comprise propane tallow diammonium dichloride.

33. A composition according to claim 18, wherein said  $R_{15}$  alkyl radicals of said quaternary ammonium salts of formula (XVII) are chosen from linear and branched  $C_1$ - $C_6$  alkyl radicals.

34. A composition according to claim 33, wherein said  $R_{15}$  radicals are linear radicals.

35. A composition according to claim 34, wherein said  $R_{15}$  radicals are chosen from methyl, ethyl, hydroxyethyl and dihydroxypropyl.

36. A composition according to claim 35, wherein said  $R_{15}$  radicals are chosen from methyl and ethyl.

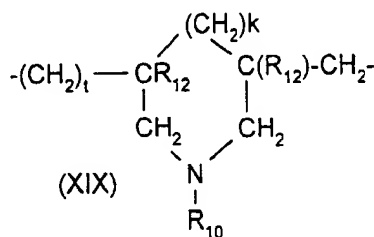
37. A composition according to claim 18, wherein said sum of  $x + y + z$  of said quaternary ammonium salts of formula (XVII) ranges from 1 to 10.

38. A composition according to claim 18, wherein said quaternary ammonium salts of formula (XIV) are chosen from (a) compounds comprising at least two fatty aliphatic radicals comprising from 8 to 30 carbon atoms, (b) compounds comprising at least one

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2
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$$\begin{array}{c} \text{-(CH}_2\text{)}_t\text{---CR}_{12} \quad \text{---(CH}_2\text{)}^k\text{---C(R}_{12}\text{)---CH}_2\text{---} \\ | \quad \quad \quad | \\ \text{CH}_2 \quad \quad \quad \text{CH}_2 \\ \quad \quad \quad \diagup \quad \diagdown \\ \quad \quad \quad \text{N}^+ \\ \quad \quad \quad | \quad | \\ \text{R}_{10} \quad \quad \text{R}_{11} \end{array} \quad \text{Y}^-$$

(XVIII)



- $k$  and  $t$ , which may be identical or different, are each chosen from 0 and 1, with the

proviso that the sum of  $k + t$  is equal to 1;

-  $R_{12}$ , which may be identical or different, are each chosen from a hydrogen atom and a methyl group;

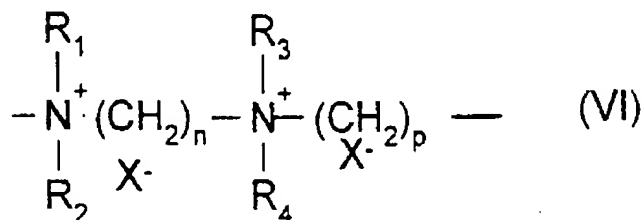
-  $R_{10}$  and  $R_{11}$ , which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups wherein the alkyl group optionally comprises from 1 to 5 carbon atoms, lower  $C_1$ - $C_4$  amidoalkyl groups, and, additionally,

$R_{10}$  and  $R_{11}$ , together with the nitrogen atom to which they are commonly attached, form at least one heterocyclic group; and

-  $Y^-$  is an anion.

41. A composition according to claim 40, wherein  $R_{10}$  and  $R_{11}$  are each chosen from piperidyl groups and morpholinyl groups and  $Y^-$  is chosen from bromide, chloride, acetate, borate, citrate, tartrate, bisulfate, bisulfite, sulfate, and phosphate.

42. A composition according to claim 1, wherein said diquaternary ammonium polymers comprise repeating units of formula (VI):





wherein:

- $R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$ , which may be identical or different, are each chosen from alkyl groups comprising from 1 to 4 carbon atoms and hydroxyalkyl groups comprising from 1 to 4 carbon atoms;
- $n$  and  $p$ , which may be identical or different, are each chosen from integers ranging from 2 to 20; and
- $X^-$  is an anion chosen from anions derived from inorganic acids and anions derived from organic acids.

43. A composition according to claim 1, wherein said at least one amphoteric starch is present in an amount ranging from 0.01% to 10% by weight, relative to the total weight of the composition.

44. A composition according to claim 43, wherein said at least one amphoteric starch is present in an amount ranging from 0.1% to 5% by weight, relative to the total weight of the composition.

45. A composition according to claim 1, wherein said at least one cationic conditioner is present in an amount ranging from 0.001% to 10% by weight, relative to the total weight of the composition.

46. A composition according to claim 45, wherein said at least one cationic conditioner is present in an amount ranging from 0.01% to 5% by weight, relative to the total weight of the composition.

47. A composition according to claim 1 further comprising at least one surfactant

chosen from anionic, nonionic and amphoteric surfactants.

48. A composition according to claim 47, wherein said at least one surfactant is present in an amount ranging from 0.1% to 60% by weight, relative to the total weight of the composition.

49. A composition according to claim 48, wherein said at least one surfactant is present in an amount ranging from 3% to 40% by weight, relative to the total weight of the composition.

50. A composition according to claim 49, wherein said at least one surfactant is present in an amount ranging from 5% to 30% by weight, relative to the total weight of the composition.

51. A composition according to claim 47, wherein said at least one surfactant is chosen from at least two different surfactants.

52. A composition according to claim 51, wherein said at least two different surfactants are chosen from (a) at least two anionic surfactants, (b) at least one anionic surfactant and at least one amphoteric surfactant, and (c) at least one anionic surfactant and at least one nonionic surfactant.

53. A composition according to claim 1 further comprising at least one additive chosen from thickeners, fragrances, nacreous agents, preserving agents, silicone sunscreens, non-silicone sunscreens, vitamins, provitamins, cationic polymers, amphoteric polymers, anionic polymers, nonionic polymers, proteins, protein hydrolysates, 18-methyleicosanoic acid, hydroxy acids, panthenol, volatile silicones, non-volatile silicones,

cyclic silicones, linear silicones, crosslinked silicones, modified silicones, and unmodified silicones.

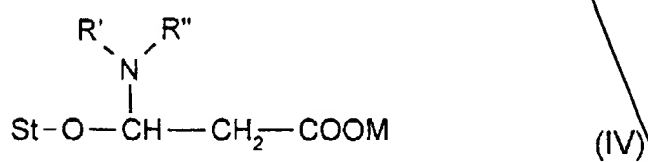
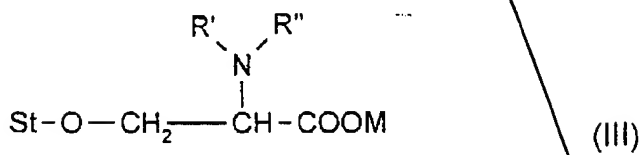
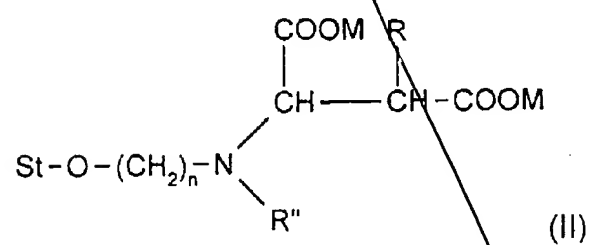
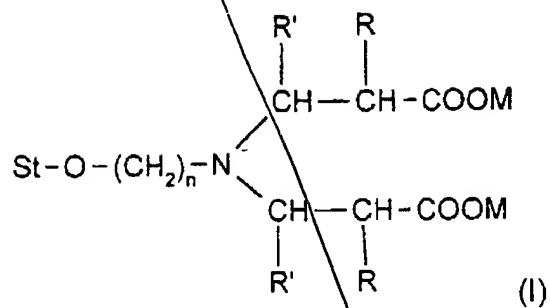
54. A composition according to claim 53, wherein said at least one additive is present in an amount ranging from greater than 0% to 20% by weight, relative to the total weight of the composition.

55. A composition according to claim 1, wherein said composition has a pH ranging from 2 to 10.

56. A composition according to claim 55, wherein said composition has a pH ranging from 3 to 6.5.

57. A shampoo, a rinse-out conditioner, a leave-in conditioner, a hair permanent-waving composition, a hair straightening composition, a hair dyeing composition, a hair bleaching composition, a rinse-out composition to be applied between steps of a permanent-waving operation, a rinse-out composition to be applied between steps of a hair-straightening operation, comprising, in a cosmetically acceptable medium:

a) at least one amphoteric starch chosen from the compounds of formulae (I) to (IV):



wherein:

St-O is a starch moiety,

R, which may be identical or different, are each chosen from a hydrogen atom and a methyl group,

R', which may be identical or different, are each chosen from a hydrogen atom, a methyl group, and a -COOH group,

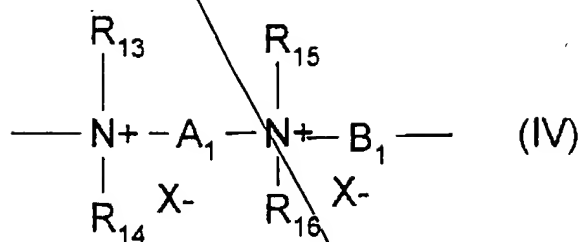
n is chosen from integers ranging from 2 to 3,

M, which may be identical or different, are each chosen from a hydrogen atom, an alkali metal, an alkaline-earth metal,  $\text{NH}_4$ , quaternary ammonium compounds, and organic amines, and

R", which may be identical or different, are each chosen from a hydrogen atom, and alkyl groups comprising from 1 to 18 carbon atoms; and

b) at least one cationic conditioner chosen from cationic silicones, quaternary ammonium salt surfactants, cyclopolymers of alkylallylamine, cyclopolymers of dialkylallylammonium, and polyquaternary ammonium polymers chosen from:

(1) diquaternary ammonium polymers comprising repeating units of formula (IV):



wherein:

- R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, which may be identical or different, are each chosen from aliphatic groups comprising from 1 to 20 carbon atoms, alicyclic groups comprising from 1 to 20 carbon atoms, arylaliphatic groups comprising from 1 to 20 carbon atoms, lower hydroxyalkylaliphatic groups, and, additionally,

at least two of said R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, with the nitrogen atoms to which they are attached, form at least one heterocycle optionally comprising an additional heteroatom other than nitrogen, and, additionally,

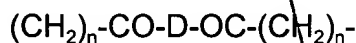
R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, which may be identical or different, are each chosen from linear and branched C<sub>1</sub>-C<sub>6</sub> alkyl groups substituted with at least one group chosen from nitrile groups, ester groups, acyl groups, amide groups and groups chosen from groups of formulae -CO-O-R<sub>17</sub>-D and -CO-NH-R<sub>17</sub>-D wherein R<sub>17</sub> is chosen from alkylene groups and D is chosen from quaternary ammonium groups;

- A<sub>1</sub> and B<sub>1</sub>, which may be identical or different, are each chosen from polymethylene groups comprising from 2 to 20 carbon atoms, chosen from linear and branched, saturated and unsaturated polymethylene groups wherein said polymethylene groups may optionally comprise, optionally linked to and optionally intercalated in the main chain, at least one entity chosen from aromatic rings, oxygen atoms, sulfur atoms, sulfoxide groups, sulfone groups, disulfide groups, amino groups, alkylamino groups, hydroxyl groups, quaternary ammonium groups, ureido groups, amide groups and ester groups;

- X<sup>-</sup> is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

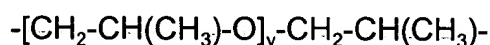
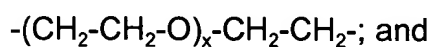
- A<sub>1</sub>, R<sub>13</sub> and R<sub>15</sub> may optionally form, together with the two nitrogen cations to which they are attached, at least one piperazine ring;

with the proviso that if A<sub>1</sub> is chosen from linear and branched, saturated and unsaturated alkylene groups and linear and branched, saturated and unsaturated hydroxyalkylene groups, B<sub>1</sub> may also be chosen from groups of formula:



wherein D is chosen from:

a) glycol residues of formula: -O-Z-O-, wherein Z is chosen from linear and branched hydrocarbon groups and groups chosen from groups of formulae:



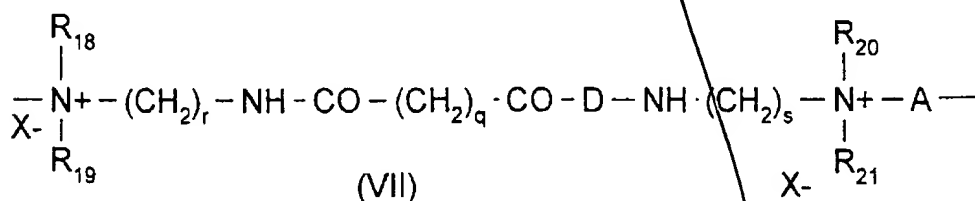
wherein x and y, which may be identical or different, are each chosen from integers ranging from 1 to 4 (in which case x and y represent a defined and unique degree of polymerization) and any number ranging from 1 to 4 (in which case x and y represent an average degree of polymerization);

b) bis-secondary diamine residues such as piperazine derivatives;

c) bis-primary diamine residues chosen from residues of formula:  $\text{-NH-Y-NH-}$ , wherein Y is chosen from linear and branched hydrocarbon groups and residues of formula  $\text{-CH}_2\text{-CH}_2\text{-S-S-CH}_2\text{-CH}_2\text{-}$ ; and

d) ureylene groups of formula:  $\text{-NH-CO-NH-}$ ; and

(2) polyquaternary ammonium polymers comprising at least one unit of formula (VII):



wherein:



-  $R_{18}$ ,  $R_{19}$ ,  $R_{20}$  and  $R_{21}$  which may be identical or different, are each chosen from a hydrogen atom, a methyl group, an ethyl group, a propyl group, a  $\beta$ -hydroxyethyl group, a  $\beta$ -hydroxypropyl group, and a  $-\text{CH}_2\text{CH}_2(\text{OCH}_2\text{CH}_2)_p\text{OH}$  group, wherein  $p$  is an integer ranging from 0 to 6;

with the proviso that  $R_{18}$ ,  $R_{19}$ ,  $R_{20}$  and  $R_{21}$  are all not simultaneously hydrogen atoms;

-  $r$  and  $s$ , which may be identical or different, are each chosen from integers ranging from 1 to 6;

-  $q$  is an integer ranging from 1 to 34;

-  $X^-$  is chosen from anions of inorganic and organic acids,

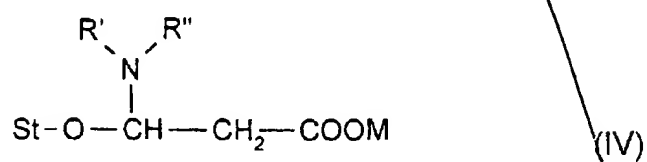
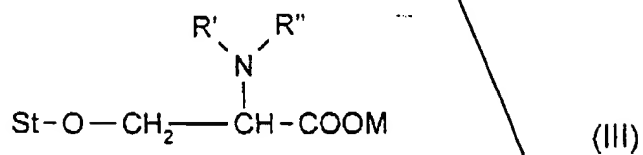
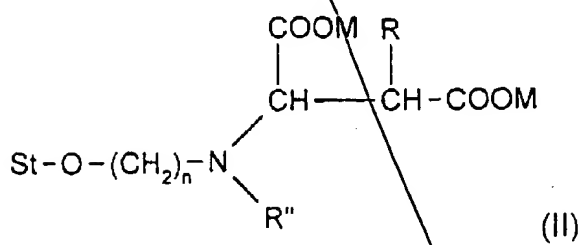
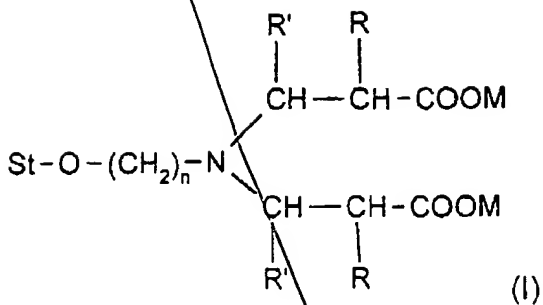
-  $D$  is chosen from direct bonds and  $-(\text{CH}_2)_t\text{-CO-}$  groups wherein  $t$  is 4 or 7; and

-  $A$  is chosen from dihalide groups and a group of formula  $-\text{CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2\text{-}$ .

58. A shower gel, a bubble bath or a make-up-removing product comprising, in a cosmetically acceptable medium:

a) at least one amphoteric starch chosen from the compounds of formulae (I) to (IV):

Sub 2  
A  
Cont

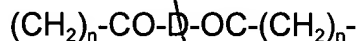


- A<sub>1</sub> and B<sub>1</sub>, which may be identical or different, are each chosen from polymethylene groups comprising from 2 to 20 carbon atoms, chosen from linear and branched, saturated and unsaturated polymethylene groups wherein said polymethylene groups may optionally comprise, optionally linked to and optionally intercalated in the main chain, at least one entity chosen from aromatic rings, oxygen atoms, sulfur atoms, sulfoxide groups, sulfone groups, disulfide groups, amino groups, alkylamino groups, hydroxyl groups, quaternary ammonium groups, ureido groups, amide groups and ester groups;

- X<sup>-</sup> is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

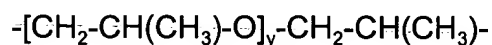
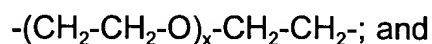
- A<sub>1</sub>, R<sub>13</sub> and R<sub>15</sub> may optionally form, together with the two nitrogen cations to which they are attached, at least one piperazine ring;

with the proviso that if A<sub>1</sub> is chosen from linear and branched, saturated and unsaturated alkylene groups and linear and branched, saturated and unsaturated hydroxyalkylene groups, B<sub>1</sub> may also be chosen from groups of formula:



wherein D is chosen from:

a) glycol residues of formula: -O-Z-O-, wherein Z is chosen from linear and branched hydrocarbon groups and groups chosen from groups of formulae:



wherein:

St-O is a starch moiety,

R, which may be identical or different, are each chosen from a hydrogen atom and a methyl group,

R', which may be identical or different, are each chosen from a hydrogen atom, a methyl group, and a -COOH group,

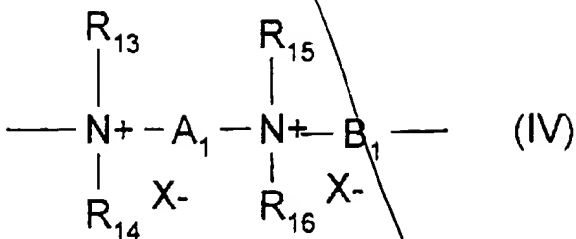
n is chosen from integers ranging from 2 to 3,

M, which may be identical or different, are each chosen from a hydrogen atom, an alkali metal, an alkaline-earth metal,  $\text{NH}_4$ , quaternary ammonium compounds, and organic amines, and

R", which may be identical or different, are each chosen from a hydrogen atom, and alkyl groups comprising from 1 to 18 carbon atoms; and

b) at least one cationic conditioner chosen from cationic silicones, quaternary ammonium salt surfactants, cyclopolymers of alkyl diallylamine, cyclopolymers of dialkyldiallylammonium, and polyquaternary ammonium polymers chosen from:

(1) diquaternary ammonium polymers comprising repeating units of formula (IV):



wherein:

- R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, which may be identical or different, are each chosen from aliphatic groups comprising from 1 to 20 carbon atoms, alicyclic groups comprising from 1 to 20 carbon atoms, arylaliphatic groups comprising from 1 to 20 carbon atoms, lower hydroxyalkylaliphatic groups, and, additionally,

at least two of said R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, with the nitrogen atoms to which they are attached, form at least one heterocycle optionally comprising an additional heteroatom other than nitrogen, and, additionally,

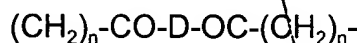
R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, which may be identical or different, are each chosen from linear and branched C<sub>1</sub>-C<sub>6</sub> alkyl groups substituted with at least one group chosen from nitrile groups, ester groups, acyl groups, amide groups and groups chosen from groups of formulae -CO-O-R<sub>17</sub>-D and -CO-NH-R<sub>17</sub>-D wherein R<sub>17</sub> is chosen from alkylene groups and D is chosen from quaternary ammonium groups;

- A<sub>1</sub> and B<sub>1</sub>, which may be identical or different, are each chosen from polymethylene groups comprising from 2 to 20 carbon atoms, chosen from linear and branched, saturated and unsaturated polymethylene groups wherein said polymethylene groups may optionally comprise, optionally linked to and optionally intercalated in the main chain, at least one entity chosen from aromatic rings, oxygen atoms, sulfur atoms, sulfoxide groups, sulfone groups, disulfide groups, amino groups, alkylamino groups, hydroxyl groups, quaternary ammonium groups, ureido groups, amide groups and ester groups;

- X<sup>-</sup> is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

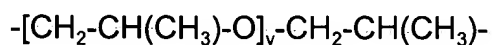
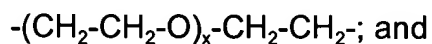
- A<sub>1</sub>, R<sub>13</sub> and R<sub>15</sub> may optionally form, together with the two nitrogen cations to which they are attached, at least one piperazine ring;

with the proviso that if A<sub>1</sub> is chosen from linear and branched, saturated and unsaturated alkylene groups and linear and branched, saturated and unsaturated hydroxyalkylene groups, B<sub>1</sub> may also be chosen from groups of formula:



wherein D is chosen from:

a) glycol residues of formula: -O-Z-O-, wherein Z is chosen from linear and branched hydrocarbon groups and groups chosen from groups of formulae:



Sub 2  
A  
Cont

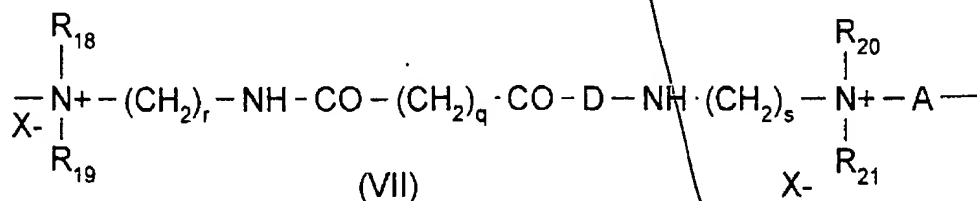
wherein x and y, which may be identical or different, are each chosen from integers ranging from 1 to 4 (in which case x and y represent a defined and unique degree of polymerization) and any number ranging from 1 to 4 (in which case x and y represent an average degree of polymerization);

b) bis-secondary diamine residues such as piperazine derivatives;

c) bis-primary diamine residues chosen from residues of formula: -NH-Y-NH-, wherein Y is chosen from linear and branched hydrocarbon groups and residues of formula -CH<sub>2</sub>-CH<sub>2</sub>-S-S-CH<sub>2</sub>-CH<sub>2</sub>-; and

d) ureylene groups of formula: -NH-CO-NH-; and

(2) polyquaternary ammonium polymers comprising at least one unit of formula (VII):



wherein:

-  $R_{18}$ ,  $R_{19}$ ,  $R_{20}$  and  $R_{21}$ , which may be identical or different, are each chosen from a hydrogen atom, a methyl group, an ethyl group, a propyl group, a  $\beta$ -hydroxyethyl group, a  $\beta$ -hydroxypropyl group, and a  $-\text{CH}_2\text{CH}_2(\text{OCH}_2\text{CH}_2)_p\text{OH}$  group, wherein  $p$  is an integer ranging from 0 to 6;

with the proviso that  $R_{18}$ ,  $R_{19}$ ,  $R_{20}$  and  $R_{21}$  are all not simultaneously hydrogen atoms;

-  $r$  and  $s$ , which may be identical or different, are each chosen from integers ranging from 1 to 6;

-  $q$  is an integer ranging from 1 to 34;

-  $X^-$  is chosen from anions of inorganic and organic acids,

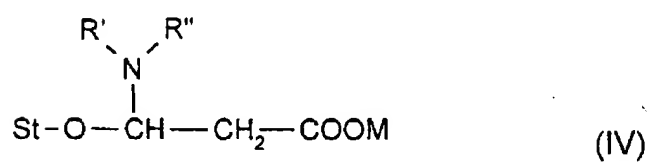
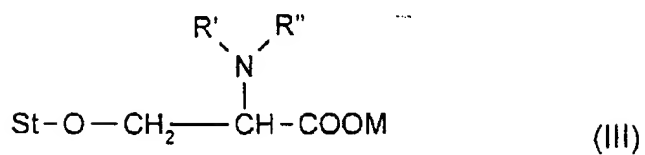
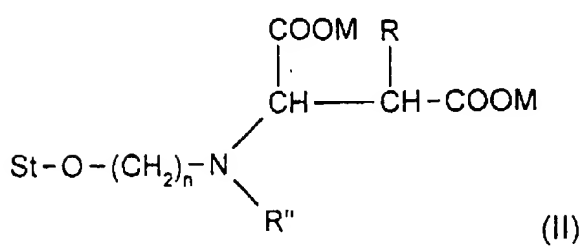
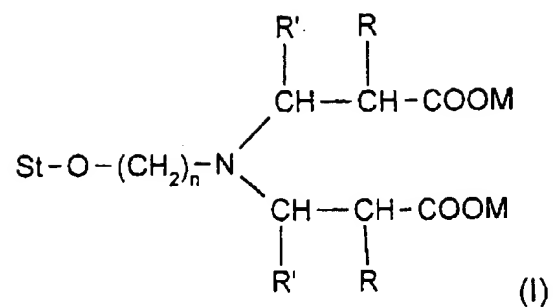
-  $D$  is chosen from direct bonds and  $-(\text{CH}_2)_t\text{CO}-$  groups wherein  $t$  is 4 or 7; and

-  $A$  is chosen from dihalide groups and a group of formula  $-\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2-$ .

59. A process for treating a keratin material comprising applying to said keratin material an amount of a composition effective to treat said keratin materials, said composition comprising, in a cosmetically acceptable medium:

a) at least one amphoteric starch chosen from the compounds of formulae (I) to (IV):





wherein:

St-O is a starch moiety,

R, which may be identical or different, are each chosen from a hydrogen atom and a methyl group,

R', which may be identical or different, are each chosen from a hydrogen atom, a methyl group, and a -COOH group,

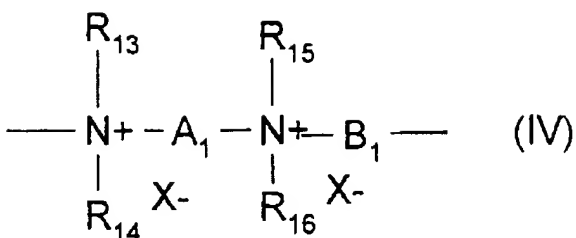
n is chosen from integers ranging from 2 to 3,

M, which may be identical or different, are each chosen from a hydrogen atom, an alkali metal, an alkaline-earth metal,  $\text{NH}_4$ , quaternary ammonium compounds, and organic amines, and

R", which may be identical or different, are each chosen from a hydrogen atom, and alkyl groups comprising from 1 to 18 carbon atoms; and

b) at least one cationic conditioner chosen from cationic silicones, quaternary ammonium salt surfactants, cyclopolymers of alkylallylamine, cyclopolymers of dialkylallylammonium, and polyquaternary ammonium polymers chosen from:

(1) diquaternary ammonium polymers comprising repeating units of formula (IV):



wherein:

- R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, which may be identical or different, are each chosen from aliphatic groups comprising from 1 to 20 carbon atoms, alicyclic groups comprising from 1 to 20 carbon atoms, arylaliphatic groups comprising from 1 to 20 carbon atoms, lower hydroxyalkylaliphatic groups, and, additionally,

at least two of said R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, with the nitrogen atoms to which they are attached, form at least one heterocycle optionally comprising an additional heteroatom other than nitrogen, and, additionally,

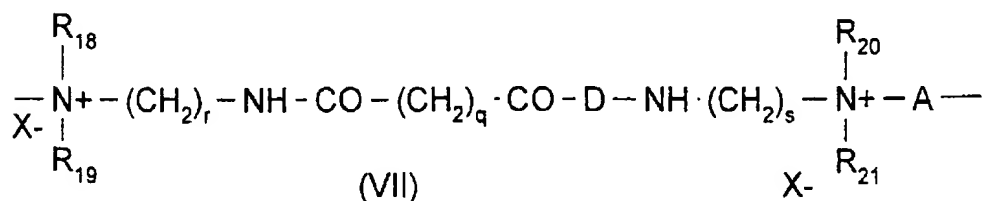
R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, which may be identical or different, are each chosen from linear and branched C<sub>1</sub>-C<sub>6</sub> alkyl groups substituted with at least one group chosen from nitrile groups, ester groups, acyl groups, amide groups and groups chosen from groups of formulae -CO-O-R<sub>17</sub>-D and -CO-NH-R<sub>17</sub>-D wherein R<sub>17</sub> is chosen from alkylene groups and D is chosen from quaternary ammonium groups;

wherein x and y, which may be identical or different, are each chosen from integers ranging from 1 to 4 (in which case x and y represent a defined and unique degree of polymerization) and any number ranging from 1 to 4 (in which case x and y represent an average degree of polymerization);

- b) bis-secondary diamine residues such as piperazine derivatives;
- c) bis-primary diamine residues chosen from residues of formula: -NH-Y-NH-, wherein Y is chosen from linear and branched hydrocarbon groups and residues of formula -CH<sub>2</sub>-CH<sub>2</sub>-S-S-CH<sub>2</sub>-CH<sub>2</sub>-; and

- d) ureylene groups of formula: -NH-CO-NH-; and

(2) polyquaternary ammonium polymers comprising at least one unit of formula (VII):



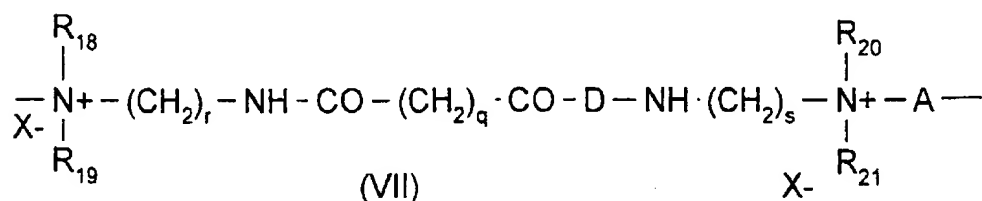
wherein:

wherein x and y, which may be identical or different, are each chosen from integers ranging from 1 to 4 (in which case x and y represent a defined and unique degree of polymerization) and any number ranging from 1 to 4 (in which case x and y represent an average degree of polymerization);

- b) bis-secondary diamine residues such as piperazine derivatives;
- c) bis-primary diamine residues chosen from residues of formula: -NH-Y-NH-, wherein Y is chosen from linear and branched hydrocarbon groups and residues of formula -CH<sub>2</sub>-CH<sub>2</sub>-S-S-CH<sub>2</sub>-CH<sub>2</sub>-; and

d) ureylene groups of formula: -NH-CO-NH-; and

(2) polyquaternary ammonium polymers comprising at least one unit of formula (VII):



wherein:

-  $R_{18}$ ,  $R_{19}$ ,  $R_{20}$  and  $R_{21}$ , which may be identical or different, are each chosen from a hydrogen atom, a methyl group, an ethyl group, a propyl group, a  $\beta$ -hydroxyethyl group, a  $\beta$ -hydroxypropyl group, and a  $-\text{CH}_2\text{CH}_2(\text{OCH}_2\text{CH}_2)_p\text{OH}$  group, wherein  $p$  is an integer ranging from 0 to 6;

with the proviso that  $R_{18}$ ,  $R_{19}$ ,  $R_{20}$  and  $R_{21}$  are all not simultaneously hydrogen atoms;

-  $r$  and  $s$ , which may be identical or different, are each chosen from integers ranging from 1 to 6;

-  $q$  is an integer ranging from 1 to 34;

-  $X^-$  is chosen from anions of inorganic and organic acids,

-  $D$  is chosen from direct bonds and  $-(\text{CH}_2)_t\text{-CO-}$  groups wherein  $t$  is 4 or 7; and

-  $A$  is chosen from dihalide groups and a group of formula  $-\text{CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2\text{-}$ .

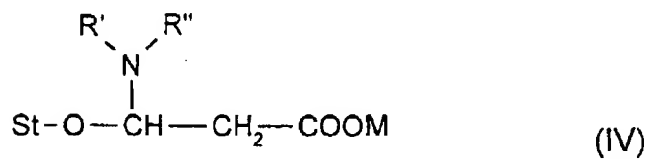
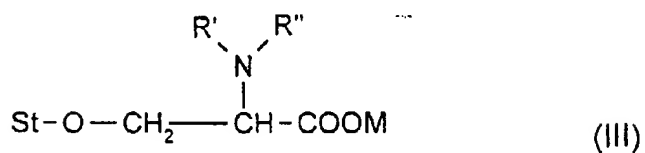
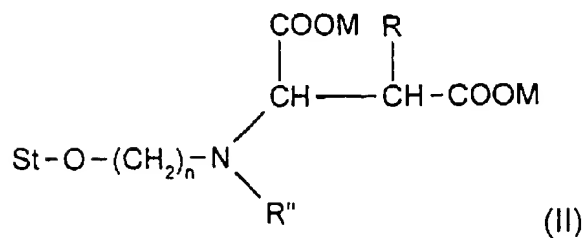
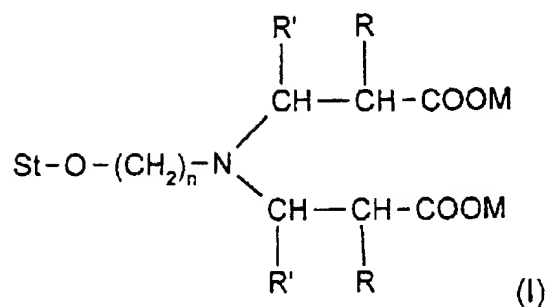
60. A process according to claim 59, wherein said keratin material is hair.

61. A process according to claim 59, wherein said keratin material is conditioned by the treatment.

62. A process according to claim 59, further comprising rinsing said keratin material with water.

63. A process for washing and conditioning a keratin material comprising applying to said keratin material an effective amount of a composition to wash and condition said keratin material; and rinsing said keratin material with water, said composition comprising, in a cosmetically acceptable medium:

a) at least one amphoteric starch chosen from the compounds of formulae (I) to (IV):



wherein:

St-O is a starch moiety,

R, which may be identical or different, are each chosen from a hydrogen atom and a methyl group,

R', which may be identical or different, are each chosen from a hydrogen atom, a methyl group, and a -COOH group,

n is chosen from integers ranging from 2 to 3,

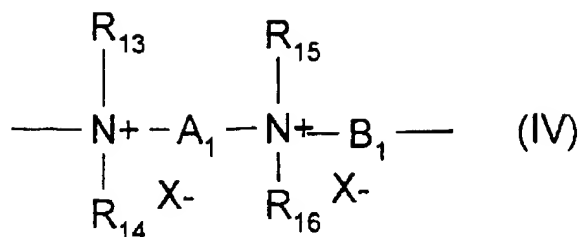
M, which may be identical or different, are each chosen from a hydrogen atom, an alkali metal, an alkaline-earth metal,  $\text{NH}_4$ , quaternary ammonium compounds, and organic amines, and

R", which may be identical or different, are each chosen from a hydrogen atom, and alkyl groups comprising from 1 to 18 carbon atoms; and

b) at least one cationic conditioner chosen from cationic silicones, quaternary ammonium salt surfactants, cyclopolymers of alkyldiallylamine, cyclopolymers of dialkyldiallylammonium, and polyquaternary ammonium polymers chosen from:

(1) diquaternary ammonium polymers comprising repeating units of formula (IV):





wherein:

- R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, which may be identical or different, are each chosen from aliphatic groups comprising from 1 to 20 carbon atoms, alicyclic groups comprising from 1 to 20 carbon atoms, arylaliphatic groups comprising from 1 to 20 carbon atoms, lower hydroxyalkylaliphatic groups, and, additionally,

at least two of said R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, with the nitrogen atoms to which they are attached, form at least one heterocycle optionally comprising an additional heteroatom other than nitrogen, and, additionally,

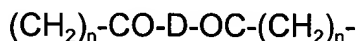
R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub> and R<sub>16</sub>, which may be identical or different, are each chosen from linear and branched C<sub>1</sub>-C<sub>6</sub> alkyl groups substituted with at least one group chosen from nitrile groups, ester groups, acyl groups, amide groups and groups chosen from groups of formulae -CO-O-R<sub>17</sub>-D and -CO-NH-R<sub>17</sub>-D wherein R<sub>17</sub> is chosen from alkylene groups and D is chosen from quaternary ammonium groups;

- A<sub>1</sub> and B<sub>1</sub>, which may be identical or different, are each chosen from polymethylene groups comprising from 2 to 20 carbon atoms, chosen from linear and branched, saturated and unsaturated polymethylene groups wherein said polymethylene groups may optionally comprise, optionally linked to and optionally intercalated in the main chain, at least one entity chosen from aromatic rings, oxygen atoms, sulfur atoms, sulfoxide groups, sulfone groups, disulfide groups, amino groups, alkylamino groups, hydroxyl groups, quaternary ammonium groups, ureido groups, amide groups and ester groups;

- X<sup>-</sup> is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

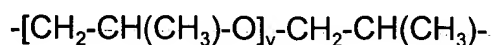
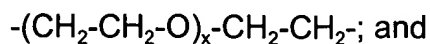
- A<sub>1</sub>, R<sub>13</sub> and R<sub>15</sub> may optionally form, together with the two nitrogen cations to which they are attached, at least one piperazine ring;

with the proviso that if A<sub>1</sub> is chosen from linear and branched, saturated and unsaturated alkylene groups and linear and branched, saturated and unsaturated hydroxyalkylene groups, B<sub>1</sub> may also be chosen from groups of formula:



wherein D is chosen from:

a) glycol residues of formula: -O-Z-O-, wherein Z is chosen from linear and branched hydrocarbon groups and groups chosen from groups of formulae:

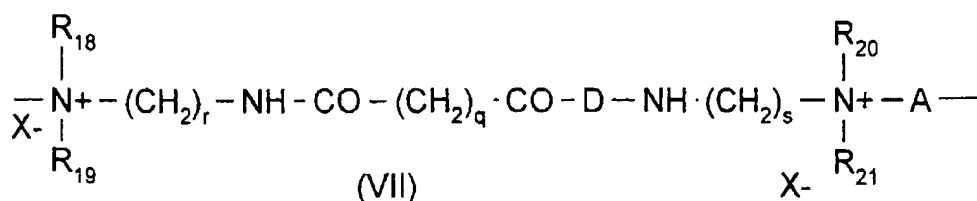


wherein x and y, which may be identical or different, are each chosen from integers ranging from 1 to 4 (in which case x and y represent a defined and unique degree of polymerization) and any number ranging from 1 to 4 (in which case x and y represent an average degree of polymerization);

- b) bis-secondary diamine residues such as piperazine derivatives;
- c) bis-primary diamine residues chosen from residues of formula:  $\text{-NH-Y-NH-}$ , wherein Y is chosen from linear and branched hydrocarbon groups and residues of formula  $\text{-CH}_2\text{-CH}_2\text{-S-S-CH}_2\text{-CH}_2\text{-}$ ; and

- d) ureylene groups of formula:  $\text{-NH-CO-NH-}$ ; and

(2) polyquaternary ammonium polymers comprising at least one unit of formula (VII):



wherein:

-  $R_{18}$ ,  $R_{19}$ ,  $R_{20}$  and  $R_{21}$ , which may be identical or different, are each chosen from a hydrogen atom, a methyl group, an ethyl group, a propyl group, a  $\beta$ -hydroxyethyl group, a  $\beta$ -hydroxypropyl group, and a  $-\text{CH}_2\text{CH}_2(\text{OCH}_2\text{CH}_2)_p\text{OH}$  group, wherein  $p$  is an integer ranging from 0 to 6;

with the proviso that  $R_{18}$ ,  $R_{19}$ ,  $R_{20}$  and  $R_{21}$  are all not simultaneously hydrogen atoms;

-  $r$  and  $s$ , which may be identical or different, are each chosen from integers ranging from 1 to 6;

-  $q$  is an integer ranging from 1 to 34;

-  $X^-$  is chosen from anions of inorganic and organic acids,

-  $D$  is chosen from direct bonds and  $-(\text{CH}_2)_t\text{-CO-}$  groups wherein  $t$  is 4 or 7; and

-  $A$  is chosen from dihalide groups and a group of formula  $-\text{CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2-$ .

64. A process according to claim 63, wherein said keratin material is wet before applying said composition.

65. A process according to claim 63, wherein said composition is left to stand on said keratin material for a period of time.

66. A process according to claim 63, wherein said keratin material is hair.

add<sup>3</sup>